

IN THE CLAIMS

Claim 1 (currently amended): A process for the preparation of a polymeric network, comprising:

- (i) adapting at least one polymer to at least one template compound dissolved or suspended in a liquid to obtain at least one conformation of the at least one polymer, and
- (ii) fixing the at least one conformation intramolecularly or intermolecularly or intra- and intermolecularly by covalent or non-covalent crosslinking.

Claim 2 (previously presented): A process according to Claim 1, wherein step (i) is carried out in the presence of at least one of the template compounds.

Claim 3 (previously presented): A process according to Claim 1 wherein the adaptation of the conformation of the at least one polymer takes place in at least two steps.

Claim 4 (previously presented): A process according to Claim 3, wherein after each of the at least two steps the conformation obtained from the step is fixed by crosslinking.

Claim 5 (previously presented): A process according to Claim 3, wherein at least one of the at least two step is carried out in the absence of the at least one template compound.

Claim 6 (previously presented): A process according to Claim 1, wherein the polymeric network is prepared on at least one support material.

Claim 7 (previously presented): A process according to Claim 6, wherein the at least one polymer is applied to the at least one support material in layers in at least two successive steps.

Claim 8 (previously presented): A process according to Claim 7, wherein the application in layers leads to a primarily crosslinked polymer network which has a conformation which is adapted to the at least one template compound in at least one further step in the presence of the at least one template compound and is fixed by crosslinking.

Claim 9 (previously presented): A polymeric network prepared by the process of Claim 1.

Claims 10-14 (canceled)

Claim 15 (previously presented): The process of claim 1 further comprising:

(iv) subsequently contacting substances to the at least one conformation to separate the substances.

Claim 16 (previously presented): The process of claim 1 further comprising:

(iv) subsequently contacting a substance to the at least one conformation to convert the substance.

Claim 17 (previously presented): The process of claim 1 further comprising:

(iv) subsequently contacting a receptor to the at least one conformation to prepare a substance.

Claim 18 (previously presented): The process of claim 1 further comprising:

(iv) subsequently contacting a substance to the at least one conformation to recognize the substance.

Claim 19 (previously presented): The process of claim 1 further comprising:

(iv) subsequently contacting a substance to the at least one conformation to detect signals.

Claim 20 (currently amended): A process for the preparation of a polymeric network, comprising:

(i) providing one or more polymers having at least one functional group comprising an OH group, amine group, a SH group, a OSO₃H group, a SO₃H group, OPO₃H₂ group, a OPO₃HR group, a PO₃H₂ group, a PO₃HR group, or a COOH group, where R in each case is selected such that an activating reagent or a derivative of said activating reagent can be reacted with said one or more polymers having at least one functional group in homogeneous and/or heterogeneous phase;

(ii) adapting at least one of the polymers from step (i) to at least one template compound that is dissolved or suspended in a liquid to obtain at least one conformation of the at least one polymer; and

(iii) fixing the at least one conformation obtained in step (ii) intramolecularly or intermolecularly or intra- and intermolecularly by covalent or non-covalent crosslinking.

Claim 21 (previously presented): The process of claim 20 wherein the polymeric network is prepared on at least one support material.

Claim 22 (previously presented): The process of claim 21 wherein the at least one polymer is applied to the at least one support material in layers in at least two successive steps.

Claim 23 (previously presented): The process of claim 22 wherein the application in layers leads to a primarily crosslinked polymer network which has a conformation which is adapted to the at least one template compound in at least one further step in the presence of the at least one template compound and is fixed by crosslinking.

Claim 24 (previously presented): A polymeric network prepared by the process of claim 20.